

**IN THE CLAIMS:**

1-4. (Cancelled)

5. (Currently Amended) A composition comprising:  
a cyclodextrin-containing polymer,  
a therapeutic agent, and  
a complexing agent, comprising:  
~~at least one functional group, and~~  
at least one host/guest moiety at a terminus of the complexing agent that forms an  
inclusion complex with a host/guest moiety of said cyclodextrin-containing  
polymer, and wherein the complexing agent comprises  
at least one polymer portion that increases solubility and/or imparts stabilization relative  
to a composition of the cyclodextrin-containing polymer and therapeutic agent  
alone; and  
wherein the cyclodextrin-containing polymer, the therapeutic agent, and the complexing agent  
are separate molecules.

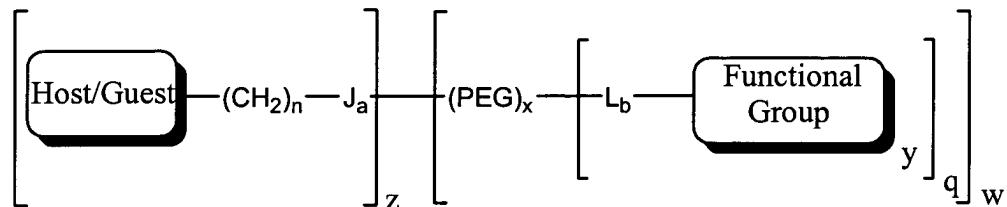
6. (Previously Presented) A composition of claim 5, wherein said therapeutic agent is  
selected from an antibiotic, a steroid, a polynucleotide, small molecule pharmaceutical, a virus, a  
plasmid, a peptide, a peptide fragment, a chelating agent, a biologically active macromolecule,  
and mixtures thereof.

7. (Original) A composition of claim 6, wherein said therapeutic agent is a polynucleotide.

8-10. (Cancelled)

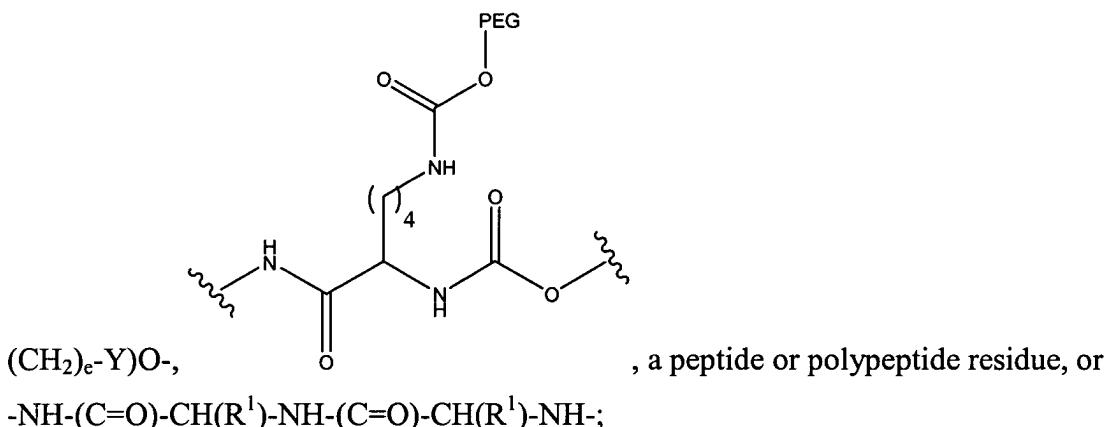
11. (Previously Presented) A composition of claim 5, wherein the host/guest of the  
complexing agent is selected from adamantyl, naphthyl, cholesterol, cyclodextrin, and mixtures  
thereof.

12. (Previously Presented) A composition of claim 5, wherein the complexing agent is a compound of the formula:



wherein

$\text{J}$  is  $-\text{NH}-$ ,  $-\text{C}(=\text{O})\text{NH}-\text{CH}_2$ <sub>d</sub> $-, -\text{NH}-\text{C}(=\text{O})-(\text{CH}_2)$ <sub>d</sub> $-, -\text{CH}_2\text{SS}-$ ,  $-\text{C}(=\text{O})\text{O}-(\text{CH}_2)$ <sub>e</sub> $-\text{O}-\text{P}(=\text{O})(\text{O}-$



$\text{Y}$  is an additional host-guest functionality;

$\text{R}^1$  is  $-(\text{CH}_2)-\text{CO}_2\text{H}$ , an ester or salt thereof; or  $-(\text{CH}_2)_a-\text{CONH}_2$ ;

PEG is  $-\text{O}(\text{CH}_2\text{CH}_2\text{O})_z-$ , where  $z$  varies from 2 to 500;

$\text{L}$  is  $\text{H}$ ,  $-\text{NH}-$ ,  $-\text{NH}-(\text{C}(=\text{O})-(\text{CH}_2)$ <sub>e</sub> $-(\text{C}(=\text{O})-\text{CH}_2$  $-, -\text{S}(=\text{O})_2-\text{HC}=\text{CH}-$ ,  $-\text{SS}-$ ,  $-\text{C}(=\text{O})\text{O}-$ , or a carbohydrate residue;

$\text{a}$  is 0 or 1;

$\text{b}$  is 0 or 1;

$\text{d}$  ranges from 0 to 6;

$\text{e}$  ranges from 1 to 6;

$\text{n}$  ranges from 0 to 6;

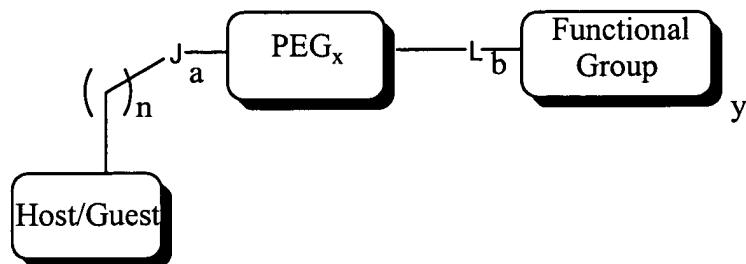
$\text{q}$  ranges from 1 to 5;

$\text{w}$  ranges from 1 to 5;

$\text{y}$  is 1; and

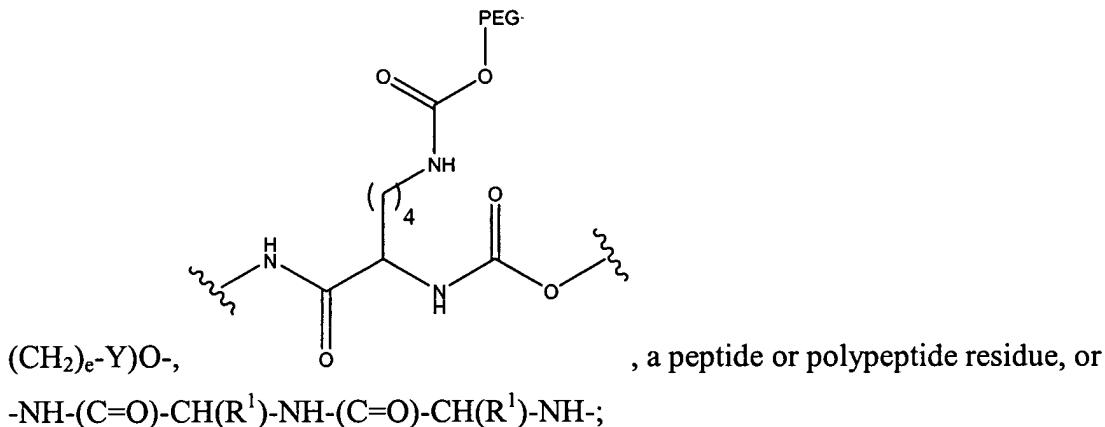
$\text{x}$  is 0 or 1.

13. (Previously Presented) A composition of claim 5, wherein the complexing agent is a compound of the formula:



wherein

J is  $-\text{NH}-$ ,  $-\text{C}(\text{=O})\text{NH}-\text{CH}_2-$ ,  $-\text{NH}-\text{C}(\text{=O})-(\text{CH}_2)_d-$ ,  $-\text{CH}_2\text{SS}-$ ,  $-\text{C}(\text{=O})\text{O}-(\text{CH}_2)_e-\text{O}-\text{P}(\text{=O})(\text{O}-$



Y is an additional host-guest functionality;

$\text{R}^1$  is  $-(\text{CH}_2)-\text{CO}_2\text{H}$ , an ester or salt thereof; or  $-(\text{CH}_2)_a-\text{CONH}_2$ ;

PEG is  $-\text{O}(\text{CH}_2\text{CH}_2\text{O})_z-$ , where z varies from 2 to 500;

L is H,  $-\text{NH}$ ,  $-\text{NH}-(\text{C}=\text{O})-(\text{CH}_2)_e-(\text{C}=\text{O})-\text{CH}_2-$ ,  $-\text{S}(\text{=O})_2-\text{HC}=\text{CH}-$ ,  $-\text{SS}-$ ,  $-\text{C}(\text{=O})\text{O}-$ , or a carbohydrate residue;

a is 0 or 1;

b is 0 or 1;

d ranges from 0 to 6;

e ranges from 1 to 6;

n ranges from 0 to 6;

y is 1; and

x is 0 or 1.

14. (Currently Amended) A composition of claim 5, wherein ~~at least one functional group includes the complexing agent further comprises~~ a group selected from a ligand, a nuclear localization signal, an endosomal release peptide, an endosomal release polymer, or a membrane permeabilization agent.

15. (Currently Amended) A composition of claim 5, wherein ~~the polymer portion at least one functional group includes a moiety that~~ increases the solubility of the composition under biological conditions relative to a composition of the cyclodextrin-containing polymer and therapeutic agent alone.

16. (Currently Amended) A composition of claim 5, wherein ~~the polymer portion at least one functional group includes a moiety that~~ stabilizes the composition under biological conditions relative to a composition of the cyclodextrin-containing polymer and therapeutic agent alone.

17. (Currently Amended) A composition of claim 5, wherein ~~at least one functional group includes the complexing agent further comprises~~ a therapeutic agent reversibly bound to the complexing agent.

18. (Previously Presented) A composition of claim 5, wherein the complexing agent further comprises a spacer group.

19. (Cancelled)

20. (Withdrawn) A composition of claim 5, wherein the cyclodextrin-containing polymer comprises at least one guest moiety that forms an inclusion complex with at least one host moiety of the complexing agent.

21. (Withdrawn) A composition of claim 20, wherein at least one guest moiety is an adamantyl group and at least one host moiety is a cyclodextrin moiety.

22. (Cancelled)

23. (Previously Presented) A composition of claim 5, wherein at least one polymer portion of the complexing agent comprises PEG or derivatives thereof.

24-25. (Cancelled)

26. (Previously Presented) A composition of claim 24, wherein at least one polymer portion of the complexing agent comprises PEG or derivatives thereof.

27. (Currently Amended) A composition of claim 5, wherein the cyclodextrin-containing polymer comprises one or more cyclodextrins in the side chains of the cyclodextrin-containing polymer.

28. (Previously Presented) A composition of claim 5, wherein the cyclodextrin-containing polymer comprises a linear cyclodextrin-containing polymer wherein cyclodextrin moieties are present in the backbone of the polymer.

29. (New) A composition of claim 5, wherein the polymer portion increases solubility and/or imparts stabilization is under biological conditions.

30. (New) A composition comprising:

a cyclodextrin-containing polymer,

a therapeutic agent, and

a complexing agent, comprising:

at least one functional group,

at least one host/guest moiety at a terminus of the complexing agent that forms an

inclusion complex with a host/guest moiety of said cyclodextrin-containing polymer, and

at least one polymeric spacer group;

wherein the cyclodextrin-containing polymer, the therapeutic agent, and the complexing agent are separate molecules.

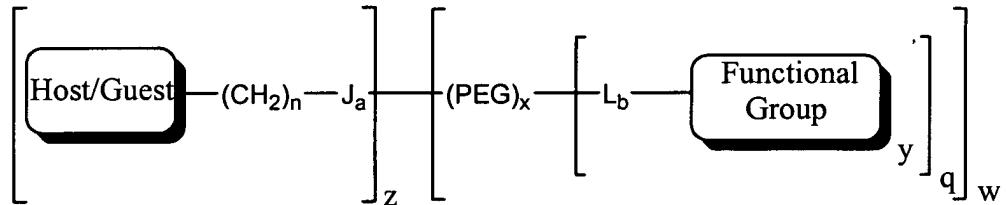
31. (New) A composition of claim 30, wherein said therapeutic agent is selected from an antibiotic, a steroid, a polynucleotide, small molecule pharmaceutical, a virus, a plasmid, a peptide, a peptide fragment, a chelating agent, a biologically active macromolecule, and mixtures thereof.

32. (New) A composition of claim 31, wherein said therapeutic agent is a polynucleotide.

33. (New) A composition of claim 30, wherein the host/guest of the complexing agent is selected from adamantyl, naphthyl, cholesterol, cyclodextrin, and mixtures thereof.

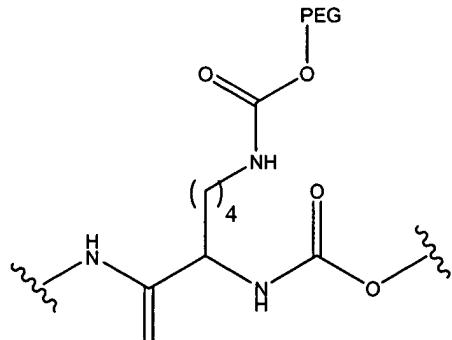
34. (New) A composition of claim 30, wherein at least one spacer group of the complexing agent comprises PEG or derivatives thereof.

35. (New) A composition of claim 34, wherein the complexing agent is a compound of the formula:



wherein

J is  $-\text{NH}-$ ,  $-\text{C}(=\text{O})\text{NH}-\text{CH}_2-$ ,  $-\text{NH}-\text{C}(=\text{O})-(\text{CH}_2)_d-$ ,  $-\text{CH}_2\text{SS}-$ ,  $-\text{C}(=\text{O})\text{O}-(\text{CH}_2)_e-\text{O}-\text{P}(=\text{O})(\text{O}-$



-NH-(C=O)-CH(R<sup>1</sup>)-NH-(C=O)-CH(R<sup>1</sup>)-NH-;

Y is an additional host-guest functionality;

R<sup>1</sup> is -(CH<sub>2</sub>)-CO<sub>2</sub>H, an ester or salt thereof; or -(CH<sub>2</sub>)<sub>a</sub>-CONH<sub>2</sub>;

PEG is  $-\text{O}(\text{CH}_2\text{CH}_2\text{O})_z-$ , where  $z$  varies from 2 to 500;

L is H, -NH, -NH-(C=O)-(CH<sub>2</sub>)<sub>e</sub>-(C=O)-CH<sub>2</sub>-, -S(=O)<sub>2</sub>-HC=CH-, -SS-, -C(=O)O-, or a carbohydrate residue;

a is 0 or 1;

b is 0 or 1;

d ranges from 0 to 6;

e ranges from 1 to 6;

n ranges from 0 to 6;

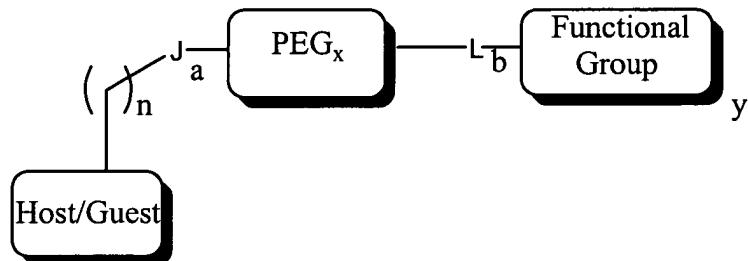
q ranges from 1 to 5;

w ranges from 1 to 5;

y is 1; and

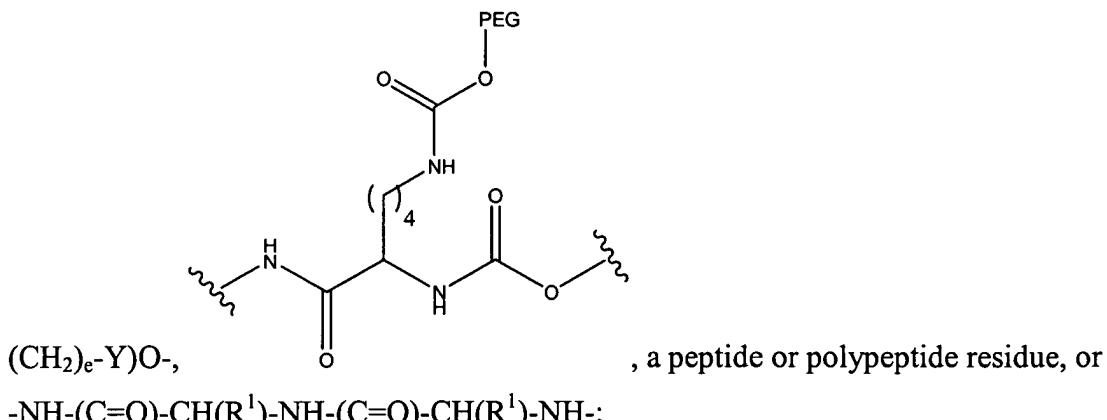
x is 1.

36. (New) A composition of claim 34, wherein the complexing agent is a compound of the formula:



wherein

J is -NH-, -C(=O)NH-CH<sub>2</sub>-, -NH-C(=O)-(CH<sub>2</sub>)<sub>d</sub>-, -CH<sub>2</sub>SS-, -C(=O)O-(CH<sub>2</sub>)<sub>e</sub>-O-P(=O)(O-



Y is an additional host-guest functionality;

R<sup>1</sup> is -(CH<sub>2</sub>)-CO<sub>2</sub>H, an ester or salt thereof, or -(CH<sub>2</sub>)<sub>a</sub>-CONH<sub>2</sub>;

PEG is -O(CH<sub>2</sub>CH<sub>2</sub>O)<sub>z</sub>-, where z varies from 2 to 500;

L is H, -NH, -NH-(C=O)-(CH<sub>2</sub>)<sub>e</sub>-(C=O)-CH<sub>2</sub>-, -S(=O)<sub>2</sub>-HC=CH-, -SS-, -C(=O)O-, or a carbohydrate residue;

a is 0 or 1;

b is 0 or 1;

d ranges from 0 to 6;

e ranges from 1 to 6;

n ranges from 0 to 6;

y is 1; and

x is 1.

37. (New) A composition of claim 30, wherein at least one functional group includes a group selected from a ligand, a nuclear localization signal, an endosomal release peptide, an endosomal release polymer, or a membrane permeabilization agent.

38. (New) A composition of claim 30, wherein at least one functional group includes a moiety that increases the solubility of the composition under biological conditions relative to a composition of the cyclodextrin-containing polymer and therapeutic agent alone.

39. (New) A composition of claim 30, wherein at least one functional group includes a moiety that stabilizes the composition under biological conditions relative to a composition of the cyclodextrin-containing polymer and therapeutic agent alone.

40. (New) A composition of claim 30, wherein at least one functional group includes a therapeutic agent reversibly bound to the complexing agent.

41. (New) A composition of claim 30, wherein the cyclodextrin-containing polymer comprises one or more cyclodextrins in side chains of the cyclodextrin-containing polymer.

42. (New) A composition of claim 30, wherein the cyclodextrin-containing polymer comprises a linear cyclodextrin-containing polymer wherein cyclodextrin moieties are present in the backbone of the polymer.